A1

1. (Amended) A breathing apparatus including a breathing circuit, the breathing circuit including:

a mouthpiece;

at least one gas carrying conduit;

a compressed gas source; and

a counterlung including a primary chamber and a secondary chamber, wherein inflation of the secondary chamber causes inflation of the primary chamber,

wherein the compressed gas source is in communication with the counterlung via the breathing circuit, and wherein the counterlung includes means for assisting expansion of the counterlung and means for assisting contraction of the counterlung.

2. (Amended) A breathing apparatus according to claim 1 further including a control to selectively activate one of the means for assisting expansion of the counterlung and the means for assisting contraction of the counterlung.

A2

4. (Amended) A breathing apparatus according to claim 1 wherein the means for assisting expansion of the counterlung is associated with the secondary chamber.

5. (Amended) A breathing apparatus according to claim 4 wherein the means for assisting expansion of the counterlung comprises a flow of the compressed gas source.

6. (Amended) A breathing apparatus according to claim 1 wherein the means for assisting contraction of the counterlung is associated with the primary chamber.

A2

7. (Amended) A breathing apparatus according to claim 6 wherein the means for assisting contraction of the counterlung is a spring which is biased towards contraction of the primary chamber.

8. A breathing apparatus according to claim 1 wherein the secondary chamber is formed within the primary chamber.

9. A breathing apparatus according to claim 8 wherein the secondary chamber communicates directly with the breathing circuit and does not communicate directly with the primary chamber.

A3

10. (Amended) A breathing apparatus according to claim 1 wherein the breathing circuit includes:

a primary breathing circuit, and

a secondary breathing circuit,

wherein the primary breathing circuit connects the primary chamber to the mouthpiece and the secondary breathing circuit connects the secondary chamber to the mouthpiece.

11. (Amended) A breathing apparatus according to claim 10 wherein the mouthpiece includes:

a pressure operated mouthpiece switch;

a first valve;

a mouthpiece chamber; and

a mouthpiece outlet,

A3 Cont'd

the switch being operable to respond to a reduction in pressure to operate the valve to allow gas from the primary chamber, via the primary breathing circuit, and gas from the secondary chamber, via the secondary breathing circuit, to enter the mouthpiece chamber, the mouthpiece chamber being in communication with the mouthpiece outlet.

12. (Amended) A breathing apparatus according to claim 10 wherein the mouthpiece includes:

a pressure operated mouthpiece switch;

a first valve;

a second valve;

a mouthpiece chamber; and

a mouthpiece outlet,

the switch being operable to respond to an increase in pressure to operate the second valve to allow compressed gas from the compressed gas source to enter the secondary chamber via the secondary breathing circuit.

13. A breathing apparatus according to claim 12 wherein only one of the first and second valves can be opened at any one time.

14. A breathing apparatus according to claim 10 wherein the apparatus further includes a non-return valve to prevent exhaled gas from entering the secondary breathing circuit.

15. (Amended) A breathing apparatus according to claim 1 wherein the mouthpiece includes an exhaust valve to exhaust, in use, any excess gas that a user continues to exhale after the primary chamber is fully expanded.

16. (Amended) A breathing apparatus according to claim 10 wherein the secondary breathing circuit includes:

a first conduit for carrying the compressed gas to the secondary chamber for inflation thereof; and

a second conduit for connecting the secondary chamber to the mouthpiece chamber for carrying gas from the secondary chamber to the mouthpiece.

17. (Amended) A breathing apparatus according to claim 16, further including a top-up valve, the compressed gas source being connected to the second conduit of the secondary breathing circuit via the top-up valve, the top-up valve being operable in the event that the primary chamber is completely collapsed.

18. A breathing apparatus according to claim 1, further including a carbon dioxide scrubber.

19. A breathing apparatus according to claim 10, further including a carbon dioxide scrubber, wherein the carbon dioxide scrubber is included in the primary breathing circuit.

20. (Amended) A breathing apparatus including a breathing circuit, the breathing circuit including:

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a mouthpiece;

at least one gas carrying conduit;

a compressed gas source;

a counterlung,

wherein the compressed gas source is in communication with the counterlung via the breathing circuit and wherein the counterlung includes:

a primary chamber;

a secondary chamber;

means for assisting expansion of the counterlung associated with the secondary chamber;

means for assisting contraction of the counterlung which is a spring which is biased towards contraction of the primary chamber;

wherein the secondary chamber is formed within the primary chamber and wherein inflation of the secondary chamber causes inflation of the primary chamber,

the breathing circuit further including:

a primary breathing circuit;

a secondary breathing circuit; and

a carbon dioxide scrubber,

wherein the primary breathing circuit connects the primary chamber to the mouthpiece and the secondary breathing circuit connects the secondary chamber to the mouthpiece, and wherein the carbon dioxide scrubber is included in the primary breathing circuit.

A4

21. (New) A breathing apparatus including a breathing circuit, the breathing circuit comprising:

a mouthpiece;

A4 cont'd

at least one gas carrying conduit for connecting a compressed gas source to the breathing apparatus; and

a counterlung including:

a primary chamber, a secondary chamber, and means for assisting expansion of the secondary chamber by communicating gas from a compressed gas source to the secondary chamber, wherein inflation of the secondary chamber causes inflation of the primary chamber.

22. (New) A breathing apparatus according to claim 21 wherein the gas carrying conduit is connected to the breathing circuit.

23. (New) A breathing apparatus according to claim 21 including means for assisting contraction of the counterlung.

24. (New) A breathing apparatus according to claim 21 wherein the secondary chamber is formed within the primary chamber.

25. (New) A breathing apparatus according to claim 24 wherein the secondary chamber communicates directly with the breathing circuit and does not communicate directly with the primary chamber.

26. (New) A breathing apparatus according to claim 21 wherein the breathing circuit includes:

a primary breathing circuit, and

a secondary breathing circuit,

wherein the primary breathing circuit connects the primary chamber to the mouthpiece and the secondary breathing circuit connects the secondary chamber to the mouthpiece.

27. (New) A breathing apparatus according to claim 26 wherein the mouthpiece includes:

a pressure operated mouthpiece switch;

a first valve;

a mouthpiece chamber; and

a mouthpiece outlet,

the switch being operable to respond to a reduction in pressure to operate the valve to allow gas from the primary chamber, via the primary breathing circuit, and gas from the secondary chamber, via the secondary breathing circuit, to enter the mouthpiece chamber, the mouthpiece chamber being in communication with the mouthpiece outlet.

28. (New) A breathing apparatus according to claim 26 wherein the mouthpiece includes:

a pressure operated mouthpiece switch;

a first valve;

a second valve;

a mouthpiece chamber; and

a mouthpiece outlet,

the switch being operable to respond to an increase in pressure to operate the second valve to allow compressed gas from the compressed gas source to enter the secondary chamber via the secondary breathing circuit.